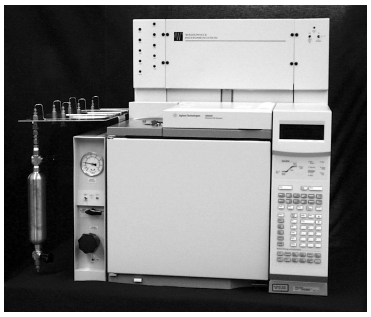
Application 383DH-00
Agilent Refinery Gas Analyzer

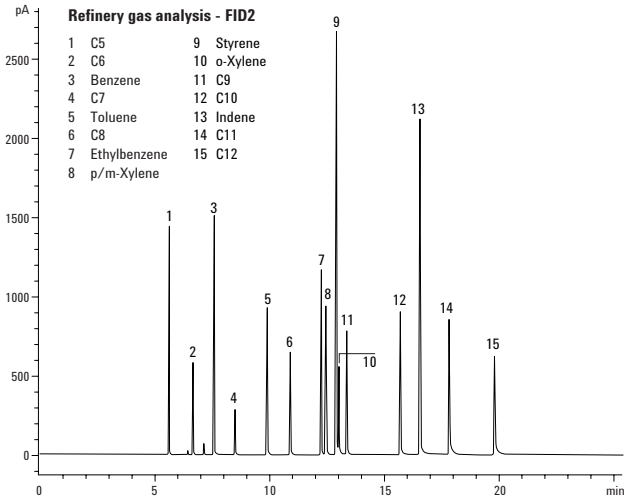
Hyper-Extended Refinery Gas Analysis

Technical Overview



Application Highlights

- A Thermal Conductivity Detector (TCD) is used to detect hydrogen in a nitrogen carrier to a lower detection limit of 100 ppm.
- A second TCD is used to detect carbon dioxide, ethane, ethylene, acetylene, hydrogen sulfide, oxygen/argon composite, nitrogen, methane, and carbon monoxide to a lower detection limit of 200 ppm except for carbon monoxide (400 ppm), and hydrogen sulfide (500 ppm).
- Flame Ionization Detector (FID) Method 1 to detect the C1 through C7 paraffins and olefins to a lower detection limit of 20 ppm, except for trace peaks eluting on the tail of a major component.
- FID Method 2 uses a long capillary column for boiling point separation of C5–C12 paraffins with the *n-paraffins* identified. Special attention to the separation and identification of customer-specified compounds is performed. The lower detection limit on the FID is 10 ppm except for trace peaks eluting on the tail of a major component.
- Analysis time of less than 15 minutes is expected for Method 1, 30 minutes for Method 2.



Optional Configurations

- Liquid sample valves for the injection of pressurized liquid samples
- Refinery gas analysis with trace sulfurs by FPD or SCD
- Additional boiling point column for the analysis of heavy hydrocarbons (C1–C30)
- Standard analysis with the addition of trace CO by methanizer
- Custom analyzer for performing ASTM D2163, ASTM D2712, and ISO 7941
- High temperature injection for heavy fractions
- High temperature reactor effluent with percent level water
- TCD/TCD/MSD for the analysis of reactor effluent gases

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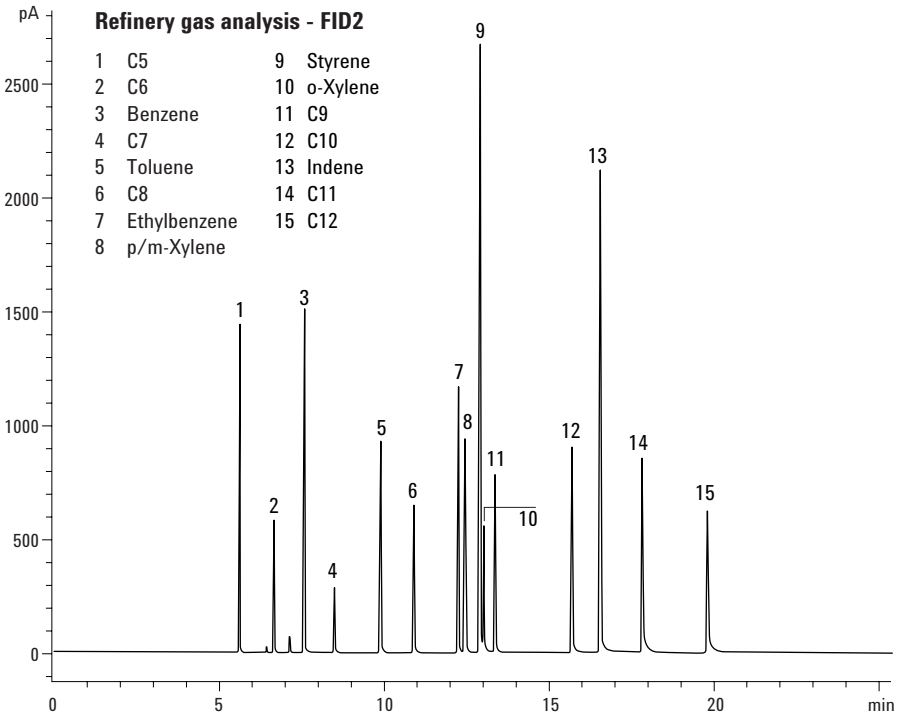

FID Method 2 output from the Agilent Hyper-Extended Refinery Gas Analyzer.

Please refer to Application 383D-00, the Agilent Extended Refinery Gas Analyzer, for output from the other detectors in this Application.

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